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PATENT APPLICATION

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IN THE
UNITED STATES PATENT AND TRADEMARK OFFICE

Inventor(s): Mamoun Abu-Samaha **Confirmation No.:** 6535

Application No.: 09/660,464 **Examiner:** Hu, Jinsong

Filing Date: Sep. 12,2000 **Group Art Unit:** 2154

Title: DISTRIBUTED UNIVERSAL COMMUNICATION MODULE FOR FACILITATING DELIVERY OF NETWORK SERVICES TO ONE OR MORE DEVICES COMMUNICATING OVER MULTIPLE TRANSPORT FACILITIES

Mail Stop Appeal Brief-Patents
Commissioner For Patents
PO Box 1450
Alexandria, VA 22313-1450

TRANSMITTAL OF APPEAL BRIEF

Sir:

Transmitted herewith is the Appeal Brief in this application with respect to the Notice of Appeal filed on Sep. 9, 2004.

The fee for filing this Appeal Brief is (37 CFR 1.17(c)) $340.00.

(complete (a) or (b) as applicable)

The proceedings herein are for a patent application and the provisions of 37 CFR 1.136(a) apply.

( ) (a) Applicant petitions for an extension of time under 37 CFR 1.136 (fees: 37 CFR 1.17(a)-(d) for the total number of months checked below:

( )	one month	$110.00
( )	two months	$430.00
( )	three months	$980.00
( )	four months	$1530.00

( ) The extension fee has already been filled in this application.

(X) (b) Applicant believes that no extension of time is required. However, this conditional petition is being made to provide for the possibility that applicant has inadvertently overlooked the need for a petition and fee for extension of time.

Please charge to Deposit Account **08-2025** the sum of **$340.00**. At any time during the pendency of this application, please charge any fees required or credit any over payment to Deposit Account 08-2025 pursuant to 37 CFR 1.25. Additionally please charge any fees to Deposit Account 08-2025 under 37 CFR 1.16 through 1.21 inclusive, and any other sections in Title 37 of the Code of Federal Regulations that may regulate fees. A duplicate copy of this sheet is enclosed.

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Respectfully submitted,

Mamoun Abu-Samaha

By _____

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant : Mamoun Abu-Samaha
Serial No. : 09/660,464
Filed : September 12, 2000
Title : DISTRIBUTED UNIVERSAL COMMUNICATION MODULE FOR FACILITATING DELIVERY OF NETWORK SERVICES TO ONE OR MORE DEVICES COMMUNICATING OVER MULTIPLE TRANSPORT FACILITIES

Art Unit : 2154
Examiner : Hu, Jinsong

Commissioner for Patents
PO Box 1450
Alexandria, VA 22313-1450

APPEAL BRIEF

I. Real Party in Interest

The real party in interest is Hewlett-Packard Development Company, L.P., a Texas Limited Partnership having its principal place of business in Houston, Texas.

II. Related Appeals and Interferences

Appellant is not aware of any related appeals or interferences that will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

III. Status of Claims

Claims 1-27 are pending.

Claims 1-20 and 24 stand rejected under 35 U.S.C. § 103(a) over Giese (U.S. 6,621,895).

CERTIFICATE OF MAILING

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November 9, 2004
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(Signature of person mailing papers)

Edouard Garcia
(Typed or printed name of person mailing papers)

Claims 21-23 and 25-27 stand rejected under 35 U.S.C. § 103(a) over Giese in view of Angwin (U.S. 6,477,576).

Appellant appeals all rejections of the pending claims 1-27.

IV. Status of Amendments

The amendments filed February 6, 2004, have been entered and acted upon by the Examiner.

No amendments were filed after the final rejection dated May 20, 2004.

V. Summary of Invention

Network-enabled devices push data to and pull data from devices connected to a network using network-aware application programs. These application programs typically interact with remote servers that provide network services, which transmit messages and service deliverables to and from various devices at different network nodes. Application programs on different devices communicate with one other using application layer protocols that set the rules governing how the application programs communicate with each other. Different types of devices typically communicate over different types of network servers that use different respective types of application layer protocols. In addition, different types of devices (e.g., computers, cellular telephones, and wireless electronic devices) typically require different respective formats (e.g., internet content, electronic mail content, voice content, and wireless content) for the contents communicated over a network. For example, internet web pages may be formatted using HTML, electronic mail messages may be formatted in accordance with the Microsoft Exchange format, voice messages may be formatted using VoxML, and wireless content may be formatted using WML.

Hitherto, developers of services for network-enabled devices typically designed their service modules to handle all of the content format conversions and protocol conversions needed for network communications for a set of target devices. In this approach, the burden on application developers increases with the number of different application layer formats and protocols used by the target devices. In addition, this approach requires each developer

to modify the modules of their service to accommodate any changes to the application layer formats and protocols used by the target devices.

The invention that is defined in the claims on appeal is exemplified by embodiments that enable service modules to communicate over a network with different types of network devices notwithstanding any differences in application layer formats or communication protocols between the source and destination devices. The invention manages communications between service modules in a way that shields service module developers from the idiosyncrasies of different network, protocol, devices, standards, routing, recovery, and other difficulties or differences. In particular, the invention enables messages and service deliverables to be transmitted between service components and other network nodes in accordance with a single, standard application-layer network communication protocol: HTTP. In this way, the invention simplifies the process of developing services and increases the efficiency with which changes in format or networking protocol are handled.

Claims 1, 3, 4, 9-11, 15, 17, 18, and 21-27 cover a system for providing remote electronic services that include an agent, an access file, and a communications module. The agent receives request for service calls in any format selected from a voice format, an internet format, an e-mail format, and a wireless format, and transmits a request for service call to the access file in accordance with a hypertext transfer protocol. The access file invokes at least one service module, which passes the one or more control parameters and the service deliverable to the communication module in accordance with a hypertext transfer protocol. The communication module transmits the service deliverable received from the at least one service module to the destination node in any format selected from a voice format, an internet format, an e-mail format, and a wireless format.

Embodiments within the scope of claims 1, 2, 5-8, 12-14, 16, 19, and 20 are described on page 11, line 7 through page 17, line 29. For example, the VoxML gateway 124 shown in FIG. 7 and the mail gateway 136 shown in FIG. 8 both correspond to the agent recited in claim 1. The active service page 102 shown in FIGS. 5 and 6A corresponds to the access file recited in claim 1. The communication module 20 shown in FIG. 5 corresponds to the communication module recited in claim 1.

Embodiments within the scope of claim 3 are described on page 11, line 24 through page 12, line 26. For example, the agent 108 shown in FIG. 6A corresponds to the origination agent recited in claim 3.

Embodiments within the scope of claim 4 are described on page 12, lines 27-32, and page 15, line 5, through page 16, line 23. For example, the active server page 102 shown in FIGS. 5 and 6A corresponds to the active server page recited in claim 4.

Embodiments within the scope of claims 9-11 are described on page 14, lines 3-24.

Embodiments within the scope of claim 15 are described on page 13, lines 4-18.

Embodiments within the scope of claim 17 are described on page 8, lines 1-4.

Embodiments within the scope of claim 18 are described on page 14, lines 3-5.

Embodiments within the scope of claims 21-23 are described on page 15, line 5 through page 16, line 2.

Embodiments within the scope of claim 24 are described on page 16, lines 9-23.

Embodiments with the scope of claims 25-27 are described on page 16, line 24 through page 17, line 2.

VI. Issues

Issue 1: Whether claims 1-20 and 24 are patentable under 35 U.S.C. § 103(a) over Giese (U.S. 6,621,895)?

Issue 2: Whether claims 21-23 and 25-27 are patentable under 35 U.S.C. § 103(a) over Giese in view of Angwin (U.S. 6,477,576)?

VII. Grouping of Claims

Each of claims 1, 3, 4, 9-11, 15, 17, 18, and 21-27 stands or falls by itself.

Claims 1, 2, 5-8, 12-14, 16, 19, and 20 stand or fall together; claims 9-11 stand or fall together; claims 21-23 stand or fall together; and claims 25-27 stand or fall together.

VIII. Argument

Issue 1: Whether claims 1-20 and 24 are patentable under 35 U.S.C. § 103(a) over Giese (U.S. 6,621,895)?

The Examiner has rejected claims 1-20 and 24 under 35 U.S.C. § 103(a) over Giese (U.S. 6,621,895).

A. Independent claim 1

Independent claim 1 recites in part that: (1) the agent receives request for service calls in any format selected from a voice format, an internet format, an e-mail format, and a wireless format, and transmits a request for service call to the access file in accordance with a hypertext transfer protocol; (2) the access file invokes at least one service module, which passes the one or more control parameters and the service deliverable to the communication module in accordance with a hypertext transfer protocol; and (3) the communication module transmits the service deliverable received from the at least one service module to the destination node in any format selected from a voice format, an internet format, an e-mail format, and a wireless format.

The Examiner has asserted that:

> Giese teaches the invention substantially as claimed including a system for providing remote electronic services [col. 1, lines 15-20], comprising an agent [10, Fig. 9], an access file [service triggers, Fig. 11; col. 5, lines 23-27 & 49-54], and a communication module [14, Fig. 9] ...

That is, the Examiner has identified Giese's contact agent 10 as corresponding to the agent recited in claim 1, the transport agent 14 as corresponding to the communication module recited in claim 1, and the "service triggers" issued by the contact agent 10 as corresponding to the access file that invokes at least one service module that produces a service deliverable. The Examiner also has identified Giese's exchange agent 12 as corresponding to the at least one service module recited in claim 1.

The Examiner has acknowledged that Giese fails to teach or suggest that communications between the contact agent 10, the exchange agent 12, and the transport agent 14 are in accordance with a hypertext transport protocol. Nevertheless, the Examiner has concluded that:

> ... it would have been obvious to a person of ordinary skill in the art at the time the invention was made to utilize HTTP format in Giese's system because http is a well-known protocol in the art for generating service query over network. One of ordinary skill in the art would have been motivated to modify Giese's system with http format based on specific design requirements.

1. The Examiner has failed to establish a proper *prima facie* case of obviousness

For the purpose of the following discussion, the examiner is reminded that:

> To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the references or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not on applicants' disclosure.

MPEP § 706.02(j). Furthermore, as pointed out by the Patent Office Board of Appeals and Interferences:

> The examiner should be aware that "deeming" does not discharge him from the burden of providing the requisite factual basis and establishing the requisite motivation to support a conclusion of obviousness.

Ex parte Stern, 13 USPQ2d 1379 (BPAI 1989).

With his rejection, the Examiner has failed to provide the requisite factual basis and failed to establish the requisite motivation to support his deemed conclusion that the features recited in independent claim 1 would have been obvious to one of ordinary skill in the art at the time of the invention. The Examiner merely asserts without any basis that "one of ordinary skill in the art would have been motivated to modify Giese's system with http format based on specific design requirements." The Examiner, however, does not even hint at the nature of those "specific design requirements" that would have motivated one of ordinary skill in the art to modify the agents disclosed in Giese. Moreover, the Examiner has failed to point to any "specific design requirements" taught or suggested in Giese that would have led one of ordinary skill in the art to modify Giese's agents 10-14 in the way the Examiner has proposed. For these reasons, the Examiner has failed to establish a proper *prima facie* case of obviousness, as required under MPEP § 706.02(j).

The Examiner is requested to cite prior art in support of his assertions. Alternatively, if the Examiner is aware of facts within his personal knowledge that provide the requisite factual basis and establishes the requisite motivation to support his deemed conclusion that

the features recited in independent claim 1 would have been obvious, the Examiner is requested to provide an affidavit in accordance with 37 CFR § 1.104(d)(2). Otherwise, the Examiner's rejection of independent claim 1 should be withdrawn.

2. In any event, the invention of claim1 is not obvious over Giese

a. Overview

Giese describes an enhanced communication services (ECS) system that allows "End-user communication appliances and content applications (including GUI functionality) [to] be built without reference to any specific network model, protocol, or transport media" (col. 5, lines 55-58). To this end, the ECS system includes a content agent 10, an exchange agent 12, and a transport agent 14 that provide "a plurality of co-operative network-based middleware services which intelligently bridge a gap between content applications and network transport services" (col. 8, lines 53-56). Giese's agents 10, 12, 14 provide an interface between content applications at the application layer and the underlying transport layer and resolve formatting and protocol incompatibilities between heterogeneous communications networks *at the transport layer*. Unlike the invention recited in the pending claims, however, Giese's agents do not address formatting and protocol incompatibilities *at the application layer*.

Giese's agents 10, 12, 14 communicate via communication and network primitives, not networking protocols. In particular:

> User applications in the content application layer 4, the Contact Agent 10 and adjacent networks 48 interact with the Exchange Agent 12 using communication primitives. The Exchange Agent 12 and adjacent networks interact with the Transport Agent 14 using network primitives. (Col. 16, lines 7-11)
>
> ...
>
> Primitives must be simple and easy to use and, for the most part, concise and limited in number. Their format is not unlike software language instructions in that they consist of an `instruction code` part followed by a string of one or more arguments. ... (Col. 16, lines 47-51)

In general, communications between agents on a single machine are handled by function calls to the operating system, whereas communications between agents on different machines are

handled by networking protocols. In Giese's system, the contact agent 10, the exchange agent 12, and the transport agent 14 are executed on a single machine upon initiation of a service instance. Therefore, the communication from the contact agent 10 to the exchange agent 12 and the communication between the exchange agent 12 and the transport agent 14 are handled by function calls to the operating system of the machine. These communications do not involve the use of any type of networking protocol because these communications are not over a network.

HTTP is a networking protocol used for communications between content applications in the application layer. As explained in the preceding paragraph, there are no network connections between the contact agent 10 and the exchange agent 12, nor are there any network connections between the exchange agent 12 and the transport agent 14. Therefore, one or ordinary skill in the field of network communications would not have configured communications from the contact agent 10 to the exchange agent 12 in accordance with the HTTP protocol, nor would one with any skill in the field of network communications configure communications between the exchange agent 12 and the transport agent 14 in accordance with the HTTP protocol. In addition, one of ordinary skill in the art would not have had any reasonable basis to conclude that replacing Giese's communication primitives with HTTP, as proposed by the Examiner, would have been successful. Therefore, one of ordinary skill in the art at the time of the invention would not have been motivated to modify Giese in the manner proposed by the Examiner.

b. Giese's contact agent 10

Giese does not teach or suggest that the contact agent 10 is operable to transmit a request-for-service call to an access file in accordance with a hypertext transfer protocol for each of the received request-for-service calls, as recited in claim 1. Giese teaches that the contact agent 10 transmits originating and receiving party profiles to the exchange agent 12 (see col. 12, lines 20-22). However, the only disclosure in Giese regarding the format of communications between the contact agent 10 and the exchange agent 12 is as follows:

> User applications in the content application layer 4, the Contact Agent 10 and adjacent networks 48 interact with the Exchange Agent 12 using communication primitives. ... (Col. 16, lines 7-9)

> Communication primitives are abstractions that enable users, user agents or adjoining networks to interact with the ECS to initiate, maintain and terminate communication services for a wide variety of content. The communication primitives consist of basic instructions sent to the Exchange Agent 12, and subsequent responses returned by the Exchange Agent 12 to enable dialog with ECS functions. The communication primitives enact fundamental communication behaviors from which more complex services can be derived. (Col. 16, lines 18-27)

There is no hint in this disclosure that would have led one of ordinary skill in the art at the time of the invention to structure communications from the contact agent 10 to the exchange agent 12 in accordance with a hypertext transfer protocol. Indeed, as explained in the Overview above, the contact agent 10 and the exchange agent 12 are on a single machine and therefore do not communicate over a network connection. For this reason, there is no reason whatsoever for one of ordinary skill in the art to modify the communications between the contact agent 10 and the exchange agent 12 to be in accordance with a networking protocol, much less to modify such communications in accordance with an application layer networking protocol such as HTTP.

c. Giese's exchange agent

The Examiner has asserted that the service module invoked by the service triggers issued by the contact agent 12 corresponds to the exchange agent 12. Contrary to the Examiner's assertion, however, Giese does not teach or suggest that the exchange agent 12 is operable to pass one or more control parameters and a service deliverable to a communication module in accordance with a hypertext transfer protocol, as recited in claim 1.

Giese teaches that the exchange agent 12 interacts with the transport agent 14 (which the Examiner has asserted corresponds to the communication module recited in claim 1) using network primitives (see col. 16, lines 9-11). Giese describes the nature and function of such network primitives at col. 16, lines 28-62. There is nothing in this disclosure, however, that would have led one of ordinary skill in the art at the time of the invention to structure communications between the exchange agent 12 and the transport agent 14 in accordance with a hypertext transfer protocol. Indeed, as explained in the Overview above, the exchange agent 12 and the transport agent 14 are on a single machine and therefore do not

communicate over a network connection. For this reason, there is no reason whatsoever for one of ordinary skill in the art to modify the communications between the exchange agent 12 and the transport agent 14 to be in accordance with a networking protocol, much less to modify such communications in accordance with an application layer networking protocol such as HTTP.

In addition, Giese's exchange agent 12 does not produce a service deliverable in accordance with a request-for-service call, as recited in claim 1. In Giese's approach, the service deliverable is produced by a content application operating in the application layer 4 (see, e.g., col. 4, lines 42-43), not the exchange agent 12. Giese teaches that the role of the exchange agent 12 is "to establish and manage end-to-end transport of payload data between the involved parties" (col. 12, lines 33-35). That is, the exchange agent 12 does not produce any payload data. Instead, the exchange agent 12 merely selects for each service instance "a best match set of transport services for the service instance" (col. 3, lines 63-64). According to Giese, the exchange agent 12 includes (col. 4, lines 50-57):

> a service management portion adapted to select a respective best match end-point device for each party involved in the service instance; a directory services portion adapted to resolve a physical address on the network corresponding to each selected end-point device; and a session control portion adapted to select, from the network space, a best match set of transport services for end-to-end connectivity between the selected end-point devices.

Thus, the exchange agent 12 does not produce payload data, contrary to the Examiner's assertion. Instead, the payload data is generated by the content applications in the application layer (see, e.g., col. 4, lines 42-43). Accordingly, Giese does not teach or suggest that the exchange agent 12 performs a prescribed function to produce a service deliverable requested in the given request-for-service call, as recited in claim 1.

The Examiner also has asserted that the service triggers issued by the contact agent 10 correspond to the access file recited in claim 1. The access file invokes at least one service module, which the Examiner has identified as corresponding to the exchange agent 12. Contrary to the Examiner's assertion, however, the service triggers issued by the contact agent 10 do not invoke the exchange agent 12. Rather, Giese explains that:

> Based on the application session requirements (originating party goals) and profile information, the Contact Agent 10 can also issue triggers for value added communication services,

> such as, for example, security, virtual networking, mobility and brokering services.

That is, the service triggers only invoke value-added services; they do not invoke the exchange agent 12.

d. Giese's transport agent

The Examiner has identified Giese's transport agent 14 as corresponding to the communication module recited in claim 1. Claim 1, however, recites that the communication module receives a service deliverable in accordance with a hypertext transfer protocol. As explained above, however, the "Exchange agent 12 and adjacent networks 48 interact with the Transport Agent 14 using network primitives" (col. 16, lines 9-11). Giese explains that (col. 16, lines 28-46):

> Network primitives are similar abstractions that enable users, user agents, Exchange Agent 12 functionality or adjoining networks 48 to interact with the Transport Agent 14, and thus the Transport Services Layer 8 of the network 2. The Transport Agent 14, in turn, implements universal Class or Quality-of Service Primitives that permit network services to initiate, maintain and terminate communication paths over any of a variety of transport technologies. Network services are unaware of transport technology.

There is no hint in this disclosure that would have led one of ordinary skill in the art at the time of the invention to structure communications between the exchange agent 12 and the transport agent 14 in accordance with the application layer hypertext transfer protocol. Indeed, as explained in the Overview above, the contact agent 10 and the exchange agent 12 are on a single machine and therefore do not communicate over a network connection. For this reason, there is no reason whatsoever for one of ordinary skill in the art to modify the communications between the exchange agent 12 and the transport agent 14 to be in accordance with a networking protocol, much less to modify such communications in accordance with an application layer networking protocol such as HTTP.

e. Conclusion

For at least the reasons explained above, the Examiner's rejection of independent claim 1 under 35 U.S.C. § 102(e) over Giese now should be withdrawn.

B. Dependent claims 2, 5-8, 12-14, 16, 19, and 20

Each of claims 2, 5-8, 12-14, 16, 19, and 20 incorporates the features of independent claim 1 and therefore is patentable over Giese for at least the same reasons explained above.

C. Dependent claim 3

Claim 3 incorporates the features of independent claim 1 and therefore is patentable over Giese for at least the same reasons explained above. Claim 3 is also patentable over Giese for the following additional reasons.

Claim 3 recites:

> Claim 3 (previously presented): The system of claim 2, wherein the origination agent is configured to transmit the request-for-service call in accordance with a hypertext transfer protocol.

The Examiner has acknowledged that Giese fails to teach or suggest that "the origination agent is configured to transmit the request-for-service call in accordance with a hypertext transfer protocol." Nevertheless, the Examiner has concluded that (emphasis added):

> ... it would have been obvious to a person of ordinary skill in the art at the time the invention was made to utilize HTTP format in Giese's system because http is a well-known protocol in the art for generating a service query over network. <u>One of ordinary skill in the art would have been motivated to modify Giese's system with http format based on specific design requirements</u>.

With his rejection, the Examiner has failed to provide the requisite factual basis and failed to establish the requisite motivation to support his deemed conclusion that the features recited in claim 3 would have been obvious to one of ordinary skill in the art at the time of

the invention. The Examiner merely asserts without any basis that "One of ordinary skill in the art would have been motivated to modify Giese's system with http format based on specific design requirements." The Examiner, however, does not even hint at the nature of those "specific design requirements" that would have motivated one of ordinary skill in the art to modify the application programs disclosed in Giese. Moreover, the Examiner has failed to point to any "specific design requirements" taught or suggested in Giese that would have led one of ordinary skill in the art to modify Giese's application programs in the way the Examiner has proposed. For these reasons, the Examiner has failed to establish a proper *prima facie* case of obviousness, as required under MPEP § 706.02(j).

In addition, contrary to the Examiner's implication, one of ordinary skill in the art at the time the invention was made would not have modified Giese to arrive at the invention recited in claim 3 for the following reasons.

In general, communications between agents on a single machine are handled by function calls to the operating system, whereas communications between agents on different machines are handled by networking protocols. In Giese's system, the contact agent 10 and the content applications that access the contact agent 10 are executed on a single machine. Therefore, the communication from the contact agent 10 to the exchange agent 12 and the communication between the exchange agent 12 and the transport agent 14 are handled by invoking function calls to the operating system of the machine through a set of primitives. Indeed, Giese explains that (col. 5, lines 49-54):

> In an embodiment of the invention, each of the agents are accessed by means of primitives enabling users, edge services and content applications to access network transport services while being shielded from the underlying technology of both the logical agents and the network transport services.

Such function calls to the operating system do not involve the use of any type of networking protocol because these communications are not over a network, as explained above in connection with claim 1.

In addition, as explained above, HTTP is a networking protocol used for network communications between content applications on different machines. Since there are no network connections between the contact agent 10 and the application programs that access the contact agent 10, no one with any skill in the field of network communications would configure communications between the application programs and the contact agent 10 in

accordance with the HTTP protocol. Indeed, even assuming for the purpose of argument that it would be possible to configure such communications in accordance with the HTTP protocol, at best such a configuration would be a terribly inefficient way to configure communications between these agents.

For these additional reasons, the Examiner's rejection of claim 3 under 35 U.S.C. § 103(a) over Giese should be withdrawn.

D. Dependent claim 4

Claim 4 incorporates the features of independent claim 1 and therefore is patentable over Giese for at least the same reasons explained above. Claim 4 is also patentable over Giese for the following additional reasons.

Claim 4 recites:

> Claim 4 (previously presented): The system of claim 1, wherein the access file is an active server page.

The Examiner has asserted that:

> As per claims 4-6, Giese teaches the access file is an active server page, wherein configure (*sic*) to obtain one or more control parameters from the given request-for-service call and to pass the control parameters to the at least one service module, wherein the control parameters are passed to the communication module [col. 8, line 62-col. 9, line 3; col. 11, lines 58-63].

The Examiner has asserted that the access file invokes Giese's exchange agent 12. Therefore, in order to render claim 4 obvious, Giese would have to teach or suggest that the exchange agent 12 is invoked by an active server page, which (as is well-known in the art) is an application layer HTML page that includes one or more scripts that are executed by a server when the HTML page is accessed. Contrary to the Examiner's assertion, however, neither of the cited sections of Giese teaches or suggests anything that would have led one of ordinary skill in the art to believe that Giese's exchange agent 12 is invoked by an active server page.

The disclosure at col. 8, line 62-col. 9, line 3, teaches that the "Functionality of the content application layer 4 will generally be provided by communication appliances and software applications and components which may be resident in any one or more user-owned

communication appliances, access provider servers, or network servers." An "access provider server", however, is not an active server page.

The disclosure at col. 11, lines 58-63, recites that:

> Application session requirements are converted by the Contact Agent 10 into one or more communication primitives. A communication primitive is a high-level interface language, agent based on high level Application Program Interface (API), that is used to request communication services.

As explained above, the communication primitives generated by the contact agent 10 are function calls to the operating system that operate in the ECS layer, which is below the application layer. These function calls, however, do not constitute an active server page (i.e., an HTML page that includes one or more scripts that are executed by a server when the HTML page is accessed).

Moreover, Giese teaches that his "invention provides Enhanced Communication Services (ECS) in a network 2 based on a layered network model and the principle of maintaining a clear separation between the layers of functionality in the network" (col. 8, lines 25-29). An active server page operates within the content application layer 4, whereas the contact agent 10 and the exchange agent 12 (which receives the communication primitives from the contact agent 10) operate within the enhanced communications services (ECS) layer 6 (see FIGS. 2 and 3). Therefore, one of ordinary skill in the art at the time the invention was made would not have been motivated to replace the ECS layer communication primitives generated by the contact agent 10 with a content application layer active server page because it would violate the "principle of maintaining a clear separation between the layers of functionality in the network."

For these additional reasons, the Examiner's rejection of claim 4 under 35 U.S.C. § 103(a) over Giese should be withdrawn.

E. Dependent claims 9-11

Each of claims 9-11 incorporates the features of independent claim 1 and therefore is patentable over Giese for at least the same reasons explained above. Claims 9-11 also are patentable over Giese for the following additional reasons.

Claim 9 recites:

> Claim 9 (Original): The system of claim 1, wherein the communication module is configured to format the service deliverable produced by the service module in accordance with an identified node type classification for the destination network node.

The Examiner has asserted that Giese's transport agent 14 corresponds to the communication module recited in claim 9. Therefore, in order to render claim 9 obvious, Giese would have to teach or suggest that the transport agent 14 is configured to format the payload data in accordance with an identified node type classification for the destination network node. The Examiner has asserted that Giese teaches the features of claim 9 at col. 11, lines 32-57, and at col. 16, lines 47-62.

The disclosure at col. 11, lines 32-57 recites:

> A service instance is typically initiated by a content application passing a party identifier of the originating party 16a (FIG. 3), and one or more codes specifying the originating party's communication goals (i.e. the application session requirements) to the Contact Agent 10 (See FIG. 4). Using the originating party identifier, the Contact Agent 10 determines the host directory (e.g. DNS or SCP) that holds the corresponding party profile 24. Requirements for the application session 18 are specified either by the originating party 16a in real-time, by the content application the originating party is using, or as previously entered datafill. Application session requirements are statements of communication class and/or quality-of-service needs in the context of the content application and user preferences. These requirements are used to create a session profile specific to the life cycle of the service instance. The session profile contains information regarding the formatting and movement of information bits for the application session 18. The formatting information specifies media type and/or device requirements while movement information specifies transport behavior preferences. By using different personal identifiers or profile attributes, a party 16 can define different multimedia behaviors that reflect the many roles of a party 16 (i.e. working role, recreational role, or family role). This enables ECS to adapt to the diverse and changing multimedia roles of parties.

Contrary to the Examiner's assertion, this disclosure does not teach that the transport agent 14 is configured to format the payload data. Indeed, this disclosure does not attribute any particular functionality to the transport agent 14.

The disclosure at col. 16, lines 47-62 recites:

> Primitives must be simple and easy to use and, for the most part, concise and limited in number. Their format is not unlike software language instructions in that they consist of an `instruction code` part followed by a string of one or more arguments. Simplicity and ease of use is required because they are intended for use by a diverse population of software application programmers and graphic user interface (GUI) designers. Further, they are intended to embody requests and responses to fundamental communication services provided by the ECS-enabled network that can be used to construct more complicated communication applications by end-users or third party service suppliers. Because the couplings between network layers must be designed to be amenable to separate layer ownership, the primitives must be easy to implement and must be exposable to different parties.

Contrary to the Examiner's assertion, this disclosure does not even hint that the transport agent 14 is configured to format the payload data. Indeed, this disclosure does not describe anything about the functionality of the transport agent 14.

The transport agent 14 only engages the set of transport services selected by the exchange agent 12 at the level of the network services layer 8. This process involves adaptations and transformations at the hardware (e.g., node and switch) level to control "the physical movement of the payload data" (col. 9, line 38). The actual application layer format of the payload data is not affected by the transport agent 14.

For at least these reasons, the Examiner's rejection of claim 9 under 35 U.S.C. § 103(a) over Giese should be withdrawn.

Claims 10 and 11 incorporate the features of claim 9 and therefore are patentable over Giese for at least the same reasons.

F. Dependent claim 15

Claim 15 incorporates the features of independent claim 1 and therefore is patentable over Giese for at least the same reasons explained above. Claim 15 is also patentable over Giese for the following additional reasons.

Claim 15 recites:

> Claim 15 (previously presented): The system of claim 14, wherein the instances of the communication module are configured to communicate with each other in accordance with a hypertext transfer protocol.

The Examiner has asserted that (emphasis added):

> As per claims 3 and 15, Giese teaches the invention substantially as in claim 1. Giese does not specifically teach the origination agent is configured to transmit the request-for-service call in accordance with a hypertext transfer protocol. However, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to utilize HTTP format in Giese's system because http is a well-known protocol in the art for generating a service query over network. One of ordinary skill in the art would have been motivated to modify Giese's system with http format based on specific design requirements.

Under MPEP § 706.02(j), the Examiner is obligated to consider separately the limitations of each of the pending claims. With his rejection of claim 15, however, the Examiner has failed to explain how Giese renders obvious the feature recited in claim 15 (i.e., that the instances of the communication module are configured to communicate with each other in accordance with a hypertext transfer protocol). Since the Examiner has failed to meet his obligation under MPEP § 706.02(j), the Examiner has failed to establish a proper *prima facie* case of obviousness under 35 U.S.C. § 103(a).

In addition, the Examiner has failed to provide the requisite factual basis and failed to establish the requisite motivation to support his deemed conclusion that the features recited in claim 15 would have been obvious to one of ordinary skill in the art at the time of the invention. The Examiner merely asserts without any basis that "One of ordinary skill in the art would have been motivated to modify Giese's system with http format based on specific design requirements." The Examiner, however, does not even hint at the nature of those "specific design requirements" that would have motivated one of ordinary skill in the art to modify the application programs disclosed in Giese. Moreover, the Examiner has failed to point to any "specific design requirements" taught or suggested in Giese that would have led one of ordinary skill in the art to modify Giese's application programs in the way the Examiner has proposed. For these additional reasons, the Examiner has failed to establish a proper *prima facie* case of obviousness, as required under MPEP § 706.02(j).

Additionally, contrary to the Examiner's implication, one of ordinary skill in the art at the time the invention was made would not have modified Giese to arrive at the invention recited in claim 15. As explained above, the transport agent 14 (which the Examiner has asserted corresponds to the communication module recited in claim 15) only engages the set

of transport services selected by the exchange agent 12 at the level of the network services layer 8. This process involves adaptations and transformations at the hardware (e.g., node and switch) level to control "the physical movement of the payload data" (col. 9, line 38). One of ordinary skill in the art at the time the invention was made would not have been motivated to modify Giese's transport agent 14 to communicate with other transport agents using HTTP because HTTP is an application layer network communications protocol. The use of HTTP for communications between Giese's transport agents would completely change the functionality of the transport agent 14 because HTTP does not provide any type of transport layer services, such as guarantee of packet delivery. In addition, such a modification would violate the design principle on which Giese's invention is based (i.e., "the principle of maintaining a clear separation between the layers of functionality in the network"; col. 8, lines 25-29).

For these additional reasons, the Examiner's rejection of claim 3 under 35 U.S.C. § 103(a) over Giese should be withdrawn.

G. Dependent claim 17

Claim 17 incorporates the features of independent claim 1 and therefore is patentable over Giese for at least the same reasons explained above. Claim 17 is also patentable over Giese for the following additional reasons.

Claim 17 recites:

> Claim 17 (previously presented): The system of claim 1, wherein the at least one service module is configured to produce an available services list to be presented by the communication module to a device initiating the given request-for-service call and residing at an origination network node.

The Examiner has asserted that Giese's exchange agent 12 corresponds to the service module recited in claim 17. Therefore, in order to render claim 17 obvious, Giese would have to teach or suggest that the exchange agent 12 is configured to produce an available services list to be presented by the communication module to a device initiating the given request-for-service call and residing at an origination network node. The Examiner has asserted that Giese teaches the features of claim 17 at col. 11, lines 32-57, and at col. 16, lines 47-62.

The disclosure at col. 11, lines 32-57 recites:

> A service instance is typically initiated by a content application passing a party identifier of the originating party 16a (FIG. 3), and one or more codes specifying the originating party's communication goals (i.e. the application session requirements) to the Contact Agent 10 (See FIG. 4). Using the originating party identifier, the Contact Agent 10 determines the host directory (e.g. DNS or SCP) that holds the corresponding party profile 24. Requirements for the application session 18 are specified either by the originating party 16a in real-time, by the content application the originating party is using, or as previously entered datafill. Application session requirements are statements of communication class and/or quality-of-service needs in the context of the content application and user preferences. These requirements are used to create a session profile specific to the life cycle of the service instance. The session profile contains information regarding the formatting and movement of information bits for the application session 18. The formatting information specifies media type and/or device requirements while movement information specifies transport behavior preferences. By using different personal identifiers or profile attributes, a party 16 can define different multimedia behaviors that reflect the many roles of a party 16 (i.e. working role, recreational role, or family role). This enables ECS to adapt to the diverse and changing multimedia roles of parties.

Contrary to the Examiner's assertion, this disclosure does not teach that the exchange agent 12 is configured to produce an available services list to be presented by the communication module to a device initiating the given request-for-service call. Indeed, this disclosure does not attribute any particular functionality to the exchange agent 12.

The disclosure at col. 16, lines 47-62 recites:

> Primitives must be simple and easy to use and, for the most part, concise and limited in number. Their format is not unlike software language instructions in that they consist of an `instruction code` part followed by a string of one or more arguments. Simplicity and ease of use is required because they are intended for use by a diverse population of software application programmers and graphic user interface (GUI) designers. Further, they are intended to embody requests and responses to fundamental communication services provided by the ECS-enabled network that can be used to construct more complicated communication applications by end-users or third party service suppliers. Because the couplings between network layers must be designed to be amenable to separate layer

> ownership, the primitives must be easy to implement and must be exposable to different parties.

Contrary to the Examiner's assertion, this disclosure does not even hint that the exchange agent 12 is configured to produce an available services list to be presented by the communication module to a device initiating the given request-for-service call. Indeed, this disclosure does not describe anything about the functionality of the exchange agent 12.

As explained above in connection with claim 1, the exchange agent 12 does not produce any type of service deliverable, much less a service deliverable corresponding to an available services list. Giese teaches that the role of the exchange agent 12 is "to establish and manage end-to-end transport of payload data between the involved parties" (col. 12, lines 33-35). That is, the exchange agent 12 does not produce any type of payload data. Instead, the exchange agent 12 merely selects for each service instance "a best match set of transport services for the service instance" (col. 3, lines 63-64).

For these reasons, the Examiner's rejection of claim 17 under 35 U.S.C. § 103(a) over Giese should be withdrawn.

H. Dependent claim 18

Claim 18 incorporates the features of independent claim 1 and dependent claim 17 and therefore is patentable over Giese for at least the same reasons explained above. Claim 18 is also patentable over Giese for the following additional reasons.

> Claim 18 (previously presented): The system of claim 17, wherein the communication module is configured to format the available services list in accordance with a received device type classification for the device at the origination network node.

The Examiner has asserted that Giese's transport agent 14 corresponds to the communication module recited in claim 18. Therefore, in order to render claim 18 obvious, Giese would have to teach or suggest that the transport agent 14 is configured to format the available services list in accordance with a received device type classification for the device at the origination network node. The Examiner has asserted that Giese teaches the features of claim 18 at col. 11, lines 32-57, and at col. 16, lines 47-62. As explained above in connection with claim 9, however, none of these cited sections of Giese describes anything about the functionality of the transport agent 14.

Moreover, the transport agent 14 only engages the set of transport services selected by the exchange agent 12 at the level of the network services layer 8. This process involves adaptations and transformations at the hardware (e.g., node and switch) level to control "the physical movement of the payload data" (col. 9, line 38). The actual application layer format of the payload data is not affected by the transport agent 14.

For these reasons, the Examiner's rejection of claim 18 under 35 U.S.C. § 103(a) over Giese should be withdrawn.

I. Dependent claim 24

Claim 24 incorporates the features of independent claim 1 and therefore is patentable over Giese for at least the same reasons explained above. Claim 24 is also patentable over Giese for the following additional reasons.

Claim 24 recites:

> Claim 24 (previously presented): The system of claim 1, wherein the agent is operable to receive an e-mail request-for-service call in an e-mail format, convert the e-mail request-for-service call into a hypertext transfer protocol request-for-service call, and transmit the hypertext transfer protocol request-for-service call to the access file.

The Examiner has asserted that:

> As per claims 7 and 24, Giese teaches the communication module is configured to communicate with the destination network node over any one of the following transport facilities: a voice network, the Internet, an electronic mail (email) network, and a wireless network [54, 56, 58, Fig. 13].

Under MPEP § 706.02(j), the Examiner is obligated to consider separately the limitations of each of the pending claims. With his rejection of claim 24, however, the Examiner has only the address the features of claim 7 relating to the communication module. The Examiner has failed to separately consider the features of claim 24 relating to the agent. In particular, the Examiner has failed to explain how Giese renders obvious the features recited in claim 24, wherein the agent is operable to receive an e-mail request-for-service call in an e-mail format, convert the e-mail request-for-service call into a hypertext transfer protocol request-for-service call, and transmit the hypertext transfer protocol request-for-

service call to the access file. Since the Examiner has failed to meet his obligation under MPEP § 706.02(j), the Examiner has failed to establish a proper *prima facie* case of obviousness under 35 U.S.C. § 103(a).

In addition, the Examiner has asserted that the contact agent 10 corresponds to the agent recited in claim 24. As explained above in connection with claim 1, there is no disclosure in Giese that would have led one of ordinary skill in the art at the time the invention was made to structure communications from the contact agent 10 to the exchange agent 12 in accordance with a hypertext transfer protocol, much less to modify the contact agent 10 to convert an e-mail request-for-service call into a hypertext transfer request-for-service call, as recited in claim 24. Indeed, the contact agent 10 and the exchange agent 12 are on a single machine and therefore do not communicate over a network connection. For this reason, there is no reason whatsoever for one of ordinary skill in the art to modify the communications between the contact agent 10 and the exchange agent 12 to be in accordance with a networking protocol, much less to modify such communications in accordance with an application layer networking protocol such as HTTP.

For these reasons, the Examiner's rejection of claim 24 under 35 U.S.C. § 103(a) over Giese should be withdrawn.

Issue 2: Whether claims 21-23 and 25-27 are patentable under 35 U.S.C. § 103(a) over Giese in view of Angwin (U.S. 6,477,576)?

Each of claims 21-23 and 25-27 incorporates the features of independent claim 1.

The Examiner has rejected claims 21-23 and 25-27 under 35 U.S.C. § 103(a) over Giese in view of Angwin (U.S. 6,477,576). Angwin, however, does not make-up for the failures of Giese's disclosure to teach or suggest the features of independent claim 1 discussed above. For at least this reason, the Examiner's rejection of claims 21-23 and 25-27 under 35 U.S.C. § 103(a) over Giese in view of Angwin should be withdrawn.

In addition, the Examiner has asserted that:

> Giese does not specifically teach or suggest the step of converting VoxML or WML format request-for-service call into a HTTP format request-for-service call and transmit it to access file. However, Angwin teaches the step of converting VoxML or format request-for-service call into a HTTP format request-for-service call and transmit it to access file [col. 7,

> lines 25-37; col. 8, lines 48-55]. It would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine the teachings of Giese and Angwin because doing so would bring convenience to user by providing service to the user whose device has voice-only capability or the display screen is small [Angwin, col. 7, lines 31-33]. One of ordinary skill in the art would have been motivated to modify Giese's system with Angwin's converting step to attract more users.

The Examiner, however, has misconstrued Angwin's disclosure. In particular, Angwin does not teach or suggest anything about converting a request-for-service call in a voice or wireless format into a hypertext transfer protocol request-for-service call.

In the first section cited by the Examiner (i.e., col. 7, lines 25-37), Angwin merely teaches that the server 20 responds to a Request Services Menu message received from a requesting device by providing to the requesting device a menu of services tailored to the characteristics of the session with the requesting device. This section certainly does not teach that the service coverts the Request Services Menu message into an HTTP Request Service Menu message, as asserted by the Examiner. Indeed, such a conversion would not serve any useful purpose whatsoever since the server 20 has already received and interpreted the Request Services Menu message.

In the second section cited by the Examiner (i.e., col. 8, lines 48-55), Angwin merely teaches that the server 20 may provide the requesting device with a complete menu of services or a URL pointer to a services menu. Angwin also teaches that, in the case where the server merely provides a URL pointer, the *requesting device* may obtain the corresponding services menu by issuing, for example, an HTTP request for the specified URL. This section certainly does not teach that the server 20 coverts the Request Services Menu message into an HTTP Request Service Menu message, as asserted by the Examiner. Indeed, such a conversion would not serve any useful purpose whatsoever since the server 20 has already received and interpreted the Request Services Menu message.

IX. Conclusion

For the reasons explained above, all of the pending claims are now in condition for allowance and should be allowed.

Charge any excess fees or apply any credits to Deposit Account No. 08-2025.

Respectfully submitted,

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APPENDIX

The claims that are the subject of Appeal are presented below.

Claim 1 (previously presented): A system for providing remote electronic services, comprising an agent, an access file, and a communication module, wherein:

the agent receives request-for-service calls in any format selected from a voice format, an internet format, an e-mail format, and a wireless format, each request-for-service call incorporating one or more control parameters including a destination node address, the agent transmits a request-for-service call to the access file in accordance with a hypertext transfer protocol for each of the received request-for-service calls;

the access file invokes at least one service module in response to a given request-for-service call received from the agent, the at least one service module performs a prescribed function to produce a service deliverable requested in the given request-for-service call, accesses an instance of the communication module, and passes the one or more control parameters and the service deliverable to the communication module in accordance with a hypertext transfer protocol; and

the communication module transmits the service deliverable received from the at least one service module to the destination network node specified in the given request-for-service call in any format selected from a voice format, an internet format, an e-mail format, and a wireless format.

Claim 2 (previously presented): The system of claim 1, further comprising an origination agent configured to transmit a request-for-service call to the agent receiving request-for-service calls.

Claim 3 (previously presented): The system of claim 2, wherein the origination agent is configured to transmit the request-for-service call in accordance with a hypertext transfer protocol.

Claim 4 (previously presented): The system of claim 1, wherein the access file is an active server page.

Claim 5 (previously presented): The system of claim 1, wherein the access file is configured to obtain one or more control parameters from the given request-for-service call and to pass the control parameters to the at least one service module.

Claim 6 (previously presented): The system of claim 5, wherein the at least one service module is configured to pass the control parameters to the communication module as a function call to a COM (Component Object Model) interface.

Claim 7 (Original): The system of claim 1, wherein the communication module is configured to communicate with the destination network node over any one of the following transport facilities: a voice network, the Internet, an electronic mail (e-mail) network, and a wireless network.

Claim 8 (Original): The system of claim 1, wherein the communication module is configured to establish a communication link with the destination network node based upon the destination node address.

Claim 9 (Original): The system of claim 1, wherein the communication module is configured to format the service deliverable produced by the service module in accordance with an identified node type classification for the destination network node.

Claim 10 (Original): The system of claim 9, wherein the communication module is configured to identify a node type classification for the destination network node based upon a communication received from the destination network node.

Claim 11 (previously presented): The system of claim 9, wherein the communication module transmits the formatted service deliverable to the destination network node.

Claim 12 (Original): The system of claim 1, further comprising a destination agent residing at the destination network node and configured to communicate with the communication module.

Claim 13 (previously presented): The system of claim 1, wherein the at least one service module resides on a first server computer, and further comprising a second service module residing on a second server computer and configured to access a second instance of the communication module.

Claim 14 (previously presented): The system of claim 12, wherein the at least one service module and the second service module are configured to cooperatively perform respective functions to produce the service deliverable and to communicate through the respective instances of the communication module.

Claim 15 (previously presented): The system of claim 14, wherein the instances of the communication module are configured to communicate with each other in accordance with a hypertext transfer protocol.

Claim 16 (previously presented): The system of claim 13, wherein each service module is registered in a common configuration database.

Claim 17 (previously presented): The system of claim 1, wherein the at least one service module is configured to produce an available services list to be presented by the communication module to a device initiating the given request-for-service call and residing at an origination network node.

Claim 18 (previously presented): The system of claim 17, wherein the communication module is configured to format the available services list in accordance with a received device type classification for the device at the origination network node.

Claim 19 (previously presented): The system of claim 1, wherein the communication module is configured to transmit a request for one or more control parameters to a device initiating the given request-for-service call and residing at an origination network node.

Claim 20 (previously presented): The system of claim 2, wherein the origination agent is configured to transmit one or more of the following control parameters with the

request-for-service call: an origination address, a security profile identifier, a service identifier, an output type identifier, a destination device address, and data.

Claim 21 (previously presented): The system of claim 1, wherein the agent is operable to receive a voice request-for-service call in a voice format, convert the voice request-for-service call into a hypertext transfer protocol request-for-service call, and transmit the hypertext transfer protocol request-for-service call to the access file.

Claim 22 (previously presented): The system of claim 21, wherein the agent is operable to receive the voice request-for-service call in a VoxML format.

Claim 23 (previously presented): The system of claim 21, wherein the agent is operable to transmit a VoxML service request form in response to receipt of the request for service call.

Claim 24 (previously presented): The system of claim 1, wherein the agent is operable to receive an e-mail request-for-service call in an e-mail format, convert the e-mail request-for-service call into a hypertext transfer protocol request-for-service call, and transmit the hypertext transfer protocol request-for-service call to the access file.

Claim 25 (previously presented): The system of claim 1, wherein the agent is operable to receive a wireless request-for-service call in a wireless format, convert the wireless request-for-service call into a hypertext transfer protocol request-for-service call, and transmit the hypertext transfer protocol request-for-service call to the access file.

Claim 26 (previously presented): The system of claim 25, wherein the agent is operable to receive the wireless request-for-service call in a WML format.

Claim 27 (previously presented): The system of claim 25, wherein the agent is operable to transmit a WML service request form in response to receipt of the request for service call.